

Remarks

The June 1, 2004 Office Action

The applicants thank the examiner for withdrawing the March 16, 2004 restriction requirement, and for acknowledging the novelty and unobviousness of the invention embodied in claims 39-41. The applicants also thank the examiner for approving the proposed drawing correction filed on February 11, 2004.

Amendment to the Title

As seen in the "Amendments to the Specification" section above, the applicants have amended the title of the patent application by deleting the phrase "and apparatus", as suggested by the examiner on page 5 of the office action. Accordingly, the title of the application now reads "Method for Treating Flue Gas".

Claim 1

The applicants' invention, as embodied in claim 1, calls for:

A method of treating a flue gas containing a dust or a pollutant, comprising the steps of:
sensibly cooling the flue gas; and
removing at least a portion of the dust from the flue gas by electrostatic precipitation, thereby forming a dust-reduced flue gas.

(See page 4 of the "Listing of Claims" section above.)

Rejection of Claim 1 Under 35 U.S.C. 102(b) as Anticipated by, or in the Alternative, Under 35 U.S.C. 103(a) as Obvious Over, Newly-Cited Kato et al. U.S. Patent No. 5,282,429

As may be seen from the text of claim 1, presented immediately above, the invention embodied by claim 1 calls, in part, for the step of "sensibly cooling the flue gas".

However, in the office action, the examiner acknowledged that “[t]he difference between the process recited in applicants’ claim 1 and that disclosed by Kato et al. is that Kato et al. do not disclose that the flue gas should be sensibly cooled” (emphasis added). (See page 3, lines 1-3 of the office action.) Accordingly, the applicants ask the examiner to withdraw the Section 102 rejection.

With regard to the Section 103 rejection, it is helpful to remember that the applicants defined the term “sensibly cooling” in the text of the application. Specifically, the applicants defined the term “sensible (sensibly) cooling” as:

[A] form of cooling which is accomplished without condensation of water which may be present in the flue gas, and without evaporation of water which may be present in the flue gas. In further detail, the term “sensible cooling” refers to cooling without changing the humidity mass ratio of the flue gas. The humidity mass ratio may be defined as the mass of water divided by the mass of dry flue gas.

(See the patent application at page 14, line 21 - page 15, line 4. Emphasis added.)

The applicants ask the examiner to withdraw the Section 103 rejection because a *prima facie* case of obviousness has not been established. For example, in calling for “sensibly cooling the flue gas”, the invention, as embodied in claim 1, calls for cooling which is accomplished not only without condensation (of water which may be present in the flue gas), but also without evaporation (of water which may be present in the flue gas). However, as may be seen in the examiner’s reasons for the rejection (see page 2 of the office action), Kato is silent with regard to evaporation, or the absence thereof. Accordingly, Kato fails to suggest the invention embodied in claim 1.

Rejection of Claims 1-38 Under 35 U.S.C. 103(a) as Being Unpatentable Over Kato in View of Newly-Cited Johnson et al. U.S. Patent No. 5,792,238

The applicants ask the examiner to withdraw this Section 103 rejection because a *prima facie* case of obviousness has not been established.

As discussed above, the invention embodied in claims 1-38 calls, in part, for “sensibly cooling the flue gas”. And, as noted above, the term “sensibly cooling” is explicitly defined as a form of cooling which is accomplished both without condensation and without evaporation. However, Kato, either taken alone or in combination with Johnson, fails to teach or suggest the invention embodied by the claims.

In making an assertion of obviousness, the examiner acknowledged that Kato does not disclose the sensible cooling of a flue gas. (See the office action at page 3, lines 1-3.) The examiner then referred the applicants to Johnson column 2, lines 48-54, concluding that, given column 2, lines 48-54, it would have been obvious “to sensibly cool the flue gas in the process of Kato”. However, this is not correct. For example, Johnson makes no mention of evaporation, or of an absence of evaporation. Accordingly, the applicants ask the examiner to withdraw the Section 103 rejection of claims 1-38.

Rejection of Claims 1-41 Under 35 U.S.C. 112, Second Paragraph

With regard to claim 1, antecedent basis for the phrase “the dust” in line 4 may be found in line 1, which states, in relevant part, “a flue gas containing a dust” (emphasis added). The applicants are unaware of any rule which prohibits antecedent basis for a term in the body of a claim from being established in the preamble of the claim.

However, if the examiner is aware of such a provision; the applicants ask the examiner to please identify the provision, so that the applicants may change the wording, as appropriate.

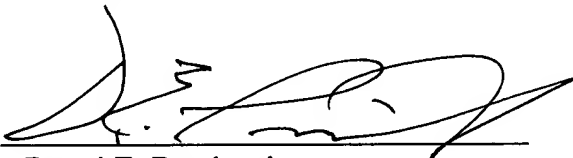
With regard to claim 27, the applicants have corrected the antecedent-basis issue by replacing "pollution-laden" with "pollutant-laden", as may be seen in the "Listing of Claims" section above.

Conclusion

Given the amendments and remarks presented above, the applicants believe that the rejections of the pending claims (claims 1-41) have been overcome. If any issues remain, the applicants ask the examiner to call the applicants' representative in order to address such issues.

Respectfully submitted,

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